

## CLAIMS

We claim:

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1. In a computer system, a method of providing a scroll bar for a file, the scroll bar including a plurality of locations corresponding to a plurality of locations in the file, the method comprising:

obtaining one or more location criteria used to identify one or more desired

10 locations in the file;

identifying one or more display criteria to be used to designate the one or more desired locations;

locating one or more desired locations in the file according to the location criteria;

and

15 displaying the scroll bar by applying the one or more display criteria to one or more locations of the scroll bar corresponding to the one or more desired locations in the file.

20 2. The method as recited in claim 1, wherein the scroll bar is generated such that segments of the scroll bar indicate relative importance of contents in the corresponding locations of the displayed file.

25 3. The method as recited in claim 1, wherein the scroll bar includes one or more horizontal segments, each of the horizontal segments indicating relative importance of contents of the displayed file.

4. The method as recited in claim 3, wherein each of the horizontal segments is displayed with at least one of a color, hue, intensity and transparency indicating its  
5 relative importance.

5. The method as recited in claim 1, wherein displaying the scroll bar further comprises applying a background display criteria to a plurality of locations of the scroll  
10 bar corresponding to remaining locations in the file that do not include the desired locations.

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6.0 The method as recited in claim 5, further comprising:  
displaying one or more of the plurality of locations in the file by applying the display criteria and the background display criteria.  
20 7.0 The method as recited in claim 6, wherein the plurality of locations are a plurality of rows in the file.

8.0 The method as recited in claim 1, further comprising:  
displaying one or more of the plurality of locations in the file by applying the  
25 display criteria.

9.0 The method as recited in claim 8, wherein the plurality of locations are a plurality of rows in the file.

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10.0 The method as recited in claim 1, further comprising:  
displaying contents of the file by applying the display criteria.

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11. The method as recited in claim 1, wherein the location criteria is used to identify one or more errors.

15 12. The method as recited in claim 1, wherein the location criteria is used to identify one or more warnings.

13. The method as recited in claim 1, further comprising:  
obtaining one or more user-defined location criteria.

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14. The method as recited in claim 13, further comprising:  
obtaining one or more user-defined display criteria.

25 15. The method as recited in claim 1, wherein the location criteria includes one or more rankings associated with one or more content-dependent criteria.

5 16. The method as recited in claim 1, wherein each of the one or more display criteria includes at least one of color, hue, intensity and transparency.

17. The method as recited in claim 16, further comprising:  
obtaining one or more user-defined display criteria.

10 18. The method as recited in claim 16, wherein each of the one or more display criteria is associated with one or more of the location criteria.

15 19. The method as recited in claim 18, further comprising:  
obtaining one or more user-defined display criteria.

20. The method as recited in claim 19, further comprising:  
obtaining one or more user-defined location criteria.

20 21. The method as recited in claim 1, further comprising:  
obtaining one or more user-defined display criteria.

22. The method as recited in claim 21, wherein each of the one or more display criteria is associated with one or more of the location criteria.

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23. The method as recited in claim 1, wherein each of the one or more display criteria is associated with one or more of the location criteria.

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24. The method as recited in claim 5, further comprising:

obtaining user-defined background display criteria.

25. The method as recited in claim 24, wherein the background display criteria

10 includes at least one of color, hue, intensity and transparency.

26. The method as recited in claim 5, wherein the background display criteria

includes at least one of color, hue, intensity and transparency.

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27. The method as recited in claim 1, wherein locating one or more desired locations in the file according to the location criteria comprises:

determining a reference count for each row in the file, the reference count indicating a number of the desired locations in the corresponding row.

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28. The method as recited in claim 27, wherein displaying the scroll bar by applying  
5 the one or more display criteria to one or more locations of the scroll bar corresponding  
to the one or more desired locations in the file comprises:

applying the one or more display criteria to the one or more locations of the scroll  
bar in accordance with the reference count for corresponding rows in the file.

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29. The method as recited in claim 28, further comprising:

displaying one or more of the plurality of locations in the file by applying the one  
or more display criteria to the one or more of the plurality of locations in the file in  
15 accordance with the reference count for corresponding rows in the file.

20 30. The method as recited in claim 28, further comprising:

dividing the reference count for each row in the file by a total number of reference  
counts in the file to obtain a row reference count;  
normalizing the row reference count for each row in the file;  
wherein applying the one or more display criteria to the one or more locations of  
25 the scroll bar includes applying the one or more display criteria to the one or more

locations of the scroll bar in accordance with the normalized row reference count for corresponding rows in the file.

31. The method as recited in claim 30, further comprising:

5 displaying one or more of the plurality of locations in the file by applying the one or more display criteria to the one or more of the plurality of locations in the file in accordance with the normalized row reference count for corresponding rows in the file.

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32. The method as recited in claim 30, further comprising:

applying a non-linear function to each normalized row reference count to generate a non-linear normalized row reference count for each row in the file;

15 wherein applying the one or more display criteria to the one or more locations of the scroll bar includes applying the one or more display criteria to the one or more locations of the scroll bar in accordance with the non-linear normalized row reference count for corresponding rows in the file.

20 33. The method as recited in claim 32, further comprising:

displaying one or more of the plurality of locations in the file by applying the one or more display criteria to the one or more of the plurality of locations in the file in accordance with the non-linear normalized row reference count for corresponding rows in the file.

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34. The method as recited in claim 32, wherein the non-linear function is a square-root function.

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35. A computer-readable medium storing thereon computer-readable instructions for providing a scroll bar for a file, the scroll bar including a plurality of locations corresponding to a plurality of locations in the file, comprising:

instructions for obtaining one or more location criteria used to identify one or more desired locations in the file;

instructions for identifying one or more display criteria to be used to designate the one or more desired locations;

15 instructions for locating one or more desired locations in the file according to the location criteria; and

instructions for displaying the scroll bar by applying the one or more display criteria to one or more locations of the scroll bar corresponding to the one or more desired locations in the file.

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36. An apparatus for providing a scroll bar for a file, the scroll bar including a plurality of locations corresponding to a plurality of locations in the file, comprising:

means for obtaining one or more location criteria used to identify one or more

25 desired locations in the file;

means for identifying one or more display criteria to be used to designate the one or more desired locations;

means for locating one or more desired locations in the file according to the location criteria; and

means for displaying the scroll bar by applying the one or more display criteria to one or more locations of the scroll bar corresponding to the one or more desired locations

5 in the file.

37. A computer system for providing a scroll bar for a file, the scroll bar including a plurality of locations corresponding to a plurality of locations in the file, comprising:

10 a processor; and

a memory, at least one of the processor and the memory being adapted for:

obtaining one or more location criteria used to identify one or more desired locations in the file;

identifying one or more display criteria to be used to designate the one or more

15 desired locations;

locating one or more desired locations in the file according to the location criteria;

and

displaying the scroll bar by applying the one or more display criteria to one or more locations of the scroll bar corresponding to the one or more desired locations in the

20 file.